



MAGAZINE

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The *I.C.I. Magazine* is published for the interest of all who work in I.C.I., and its contents are contributed largely by people in I.C.I. It is edited by Richard Keane and printed at The Kynoch Press, Birmingham, and is published every month by Imperial Chemical Industries Limited, Imperial Chemical House, S.W.1. Telephone: VICTORIA 4486. The editor is glad to consider articles for publication, and payment will be made for those accepted.

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FRONT COVER: "Water Lilies,"
by John Brooks (Nobel Division)

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Alkali Boys Choose Their Careers

By Norman Vigars

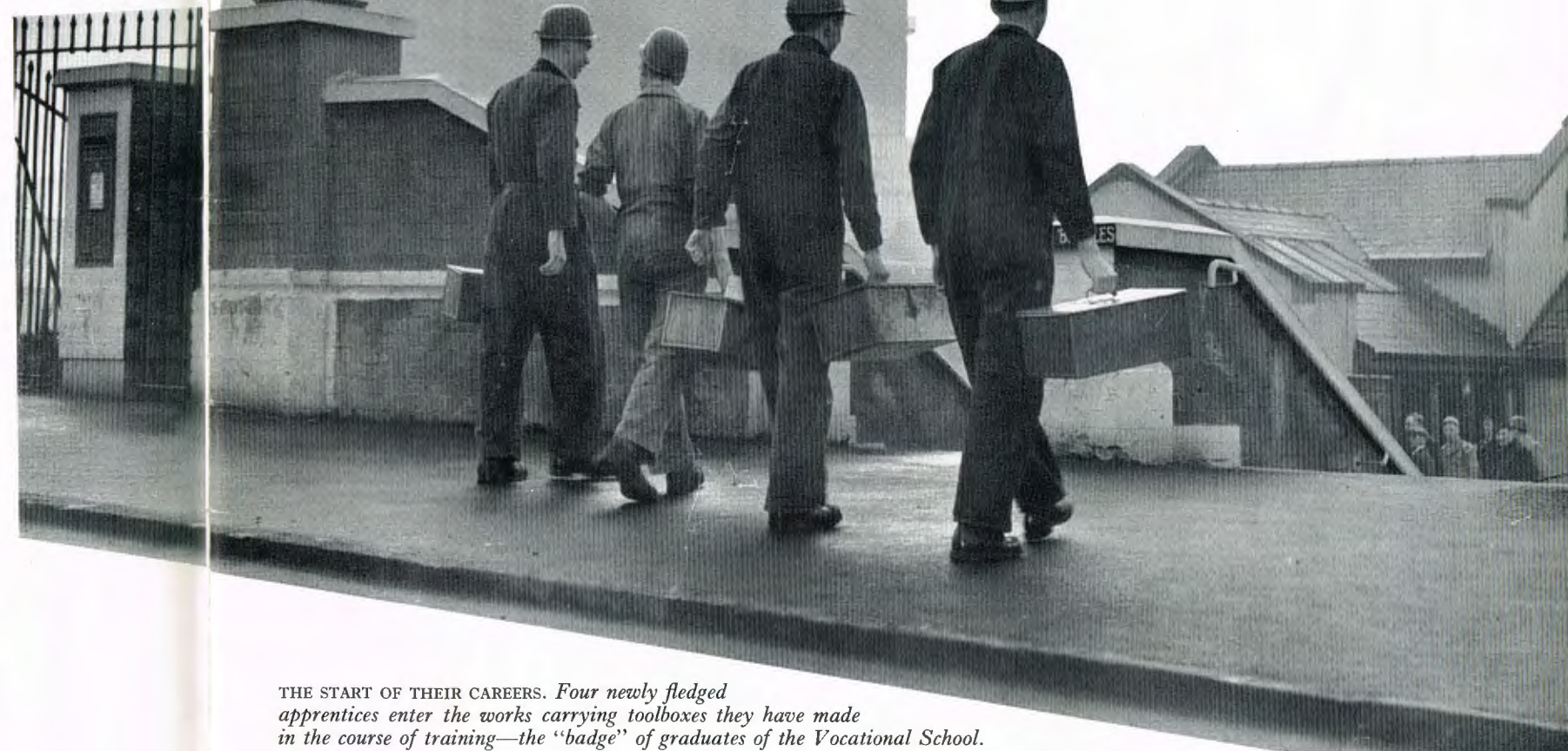
A vocational school where boys of 15 and 16 spend six months being prepared for industry, after which they choose their careers on the basis of aptitudes shown, is a unique feature of Alkali Division training. Here are the impressions of a visiting cameraman.

THE tradesmen of this world, with a five or seven years' apprenticeship behind them, know that, come what may, their skill in their hands and the "know-how" of their craft can never be taken from them. Yet all too many, with a fair modicum of security and standard of living, suffer that appalling blackness of this age—frustration. The old tale of square pegs in round holes. It was a bitter joke in the forces during the war—the carpenters who became medical orderlies, and so on.

At Alkali Division of I.C.I. I went to look at a scheme which is tackling this problem and aiming to fit the right boys to the right jobs. It is a good scheme and goes by the name of the Vocational Training School. It is working well for the Company in that they are assuring themselves of at least a basic intake of apprentices and future process operators of the right type. More than this, it is giving a heaven-sent opportunity to some eighty boys a year to spend six interest-packed months deciding on their future.

Every boy goes through all the phases of the training—process work, joinery, boilermaking, engineering and electrical work. Then on the basis of aptitudes shown careers are selected. A lad with a burning ambition in his last weeks at school to become a plumber might find himself within six months embarking on a career as an electrician, with no limits in front of him.

Dr. Muir Smith, in charge of the school and of the Division's education, outlined the aims in the following simple words:



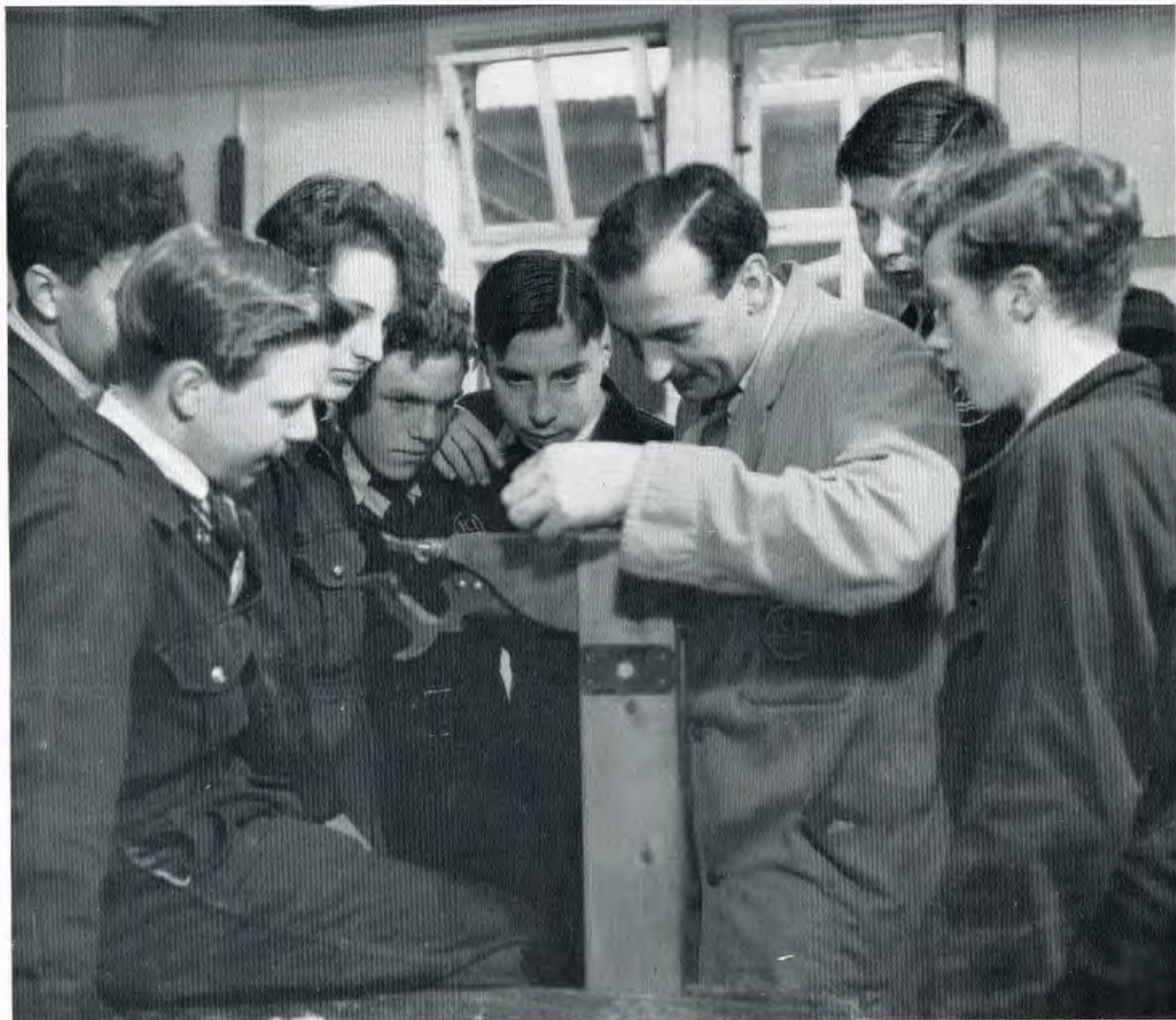
THE START OF THEIR CAREERS. Four newly fledged apprentices enter the works carrying toolboxes they have made in the course of training—the "badge" of graduates of the Vocational School.

1. To introduce boys to industry and to individual responsibility.
 2. To select boys who will work happily in groups.
 3. To impart basic skills in the use of simple chemical apparatus and of hand tools used in engineering and building trades.
 4. To find out for what career each boy is best suited.
- Dr. Muir Smith is a chemist turned educationist—an old servant of the Company passionately interested in his job and assisted by a very able team. Mr. Goldney and Mr. Faulkner are his assistants, and there is a group of practical men, highly skilled at their own trade, who are

the individual instructors. These latter are like the N.C.O.s of a regiment and form the backbone of the school.

The school is not just a training shop for a job of work. A corporate spirit is evident from the first day and carefully nurtured throughout the course. Discipline is strict, as it must be when any group of people get together to achieve something.

My first impressions were in the Fitter Group. It was in an ordinary, well-equipped workroom with plenty of hammering and scraping going on. There was whistling and the odd burst of song. A loudspeaker announced a



CARE OF TOOLS is a "must" in the boys' curriculum. Mr. Crisp shows a group the right way to sharpen a saw.

mid-week football result amid cheers. The atmosphere was competitive, though not in the piecework sense. This group was making either callipers or a small metal square. It was one of the tools they would take to the final interview when their future was decided. Also, if up to standard, the tool would be theirs to keep and use for maybe many years. Considered in this light, it was a pretty important thing for a fifteen-year-old to be working on.

They compared progress



CHECKING THEIR HOME-MADE TOOLS are Graham Oakes (left), who is making a steel square, and Leslie Leathers (right)

in pairs and little groups. Measurements were continually checked and re-checked. Then they wandered over to benign "Ossie" Bentley, their instructor, and watched as he ran skilful hands over the instrument and quietly told them his own considered opinion.

A chisel was being made in the boilermakers' class amid a clatter of hammers on anvils with a roaring forge for a background. A 7 lb. sledgehammer was swinging, and I thought that this was no job for weaklings. Then I was



Portrait of an apprentice-to-be: 15-year-old Keith Murray



Benign "Ossie" Bentley, a fitter instructor, shows Colin Bailey where he might go wrong if he is not careful

told about the half-hour daily P.T. which every boy, unless sick, carries out. Sometimes it is just exercises, but occasionally a little spice is added by a few short rounds of boxing.

To keep the spirit of a self-supporting unit, the boys do all their own cleaning of the entire school. After a brief roll call at 8.30 sharp there is a rush for brooms and mops. During the morning I noticed a lone figure cleaning lockers in the boys' canteen. I enquired the reason and was told it was a case of punishment for some minor

misdemeanour—punishment which had been instantly administered and then the whole thing forgotten. Dr. Muir Smith said "We get all sorts of little psychological 'what-nots' in the early stages, yet we rarely get any problem boys." Such cases would be weeded out in the first few days.

An interesting sidelight which the staff explained to me was that at certain intervals in the course there are assessments of progress. This is done by the boys themselves—marking each other's work. Seldom does the verdict of the staff vary from that of the boys.



THE DRAWING CLASS. Joiner instructor Bill Burrows points out to John Cooksley an inconsistency in his drawing.

Among the useful things a boy makes during his course is a large metal toolbox. These are made to a very high standard and, like the tools, are retained by the boys. They have become the badge of the "graduates" of the school.

Chatting to the boys I began to get some first-hand impressions of what the school meant, not only to themselves but among their friends and families outside. Some told me that school friends asked about it, as they had heard stories of its methods and purpose. The boys are the usual cross-section of any community, about one-third coming from grammar schools. There was the inevitable funny man, the prodigious eater, the sports type and the studious ones.

The finest recommendation for the establishment came from a sixteen-year-old, Roy "Nobby" Clarke, who hopes to be an instrument artificer. He said "When I left school I was a bit apprehensive about everything. Now I've got confidence in myself."

I think that summed up a lot of things. These young men were getting their confidence before they started their apprenticeship or their training for process jobs. Although they get paid for their time in the school, they have to give a lot themselves. It is the act of giving on both sides, staff and pupils, that breeds the confidence—or, if you like, morale. A famous general said during the last war that morale was a precious pearl. It is good to think that the pearls are still available for those who would seek them.



A CORNER OF THE CHEMICAL LAB. Here process groups get their first introduction to the manufacture of alkalis.

Information Notes

I.C.I.'S CAPITAL PLANS

By J. L. Armstrong (Finance Director)

On 19th February last the Board of I.C.I. announced its proposals for raising more money and for reorganising the capital structure of the Company. On 10th March a formal letter was sent to every stockholder, setting out some of the details of these proposals and inviting their subscription to a new 4½% Unsecured Loan Stock. In this short note the I.C.I. Finance Director explains some of these plans and the background to them.

FIRST I will deal with the plan to raise additional loan capital. Why are we asking for more money? The answer is simply that the Company needs more funds to carry on its large capital development programme. Since the end of the war we have spent approximately £160,000,000 on constructing and acquiring new plants and equipment and have invested a further £50,000,000 both in additional working capital to finance the new production and in subsidiary and associated companies, at home and abroad, to enable them to expand their manufacturing and trading activities. This makes a total of some £210,000,000, of which £150,000,000 has come from moneys which the Company has set aside mostly out of earnings, while the balance of £60,000,000 has been raised from outside sources.

Profits Ploughed Back

The amount of £150,000,000 provided from internal sources had its origin in a number of ways. We began the post-war period with some £16,000,000 in the shape of cash and marketable investments. Then each successive year's profits on trading, after payment of our taxes and the dividends on the Company's share capital, have made their contribution to cash resources. The actual amount of cash which a company normally is able in any year to conserve so as to become available for its development and the replacement and expansion of its assets is roughly represented by the amount it has carried to its various reserves in that year, together with the amount charged in its accounts for depreciation of its operating assets.

But, although I.C.I. has throughout maintained a conservative policy and has during the post-war period created large reserves for special purposes in addition to retaining or "ploughing back" profits for the expansion of its activities, it has still not been able to conserve sufficient funds to provide for that high degree of development and growth in the manufacture of both old and new products which is inevitable if it is to play its part in keeping Britain in the forefront of world chemical production.

Consequently we have on three separate occasions already had to raise additional money from outside sources. In 1948

and again in 1952 we issued 10,093,023 Ordinary shares of £1 each to Ordinary stockholders of the Company at the price of 40s. 6d. per share and in 1950 we created £20,000,000 of 4% Unsecured Loan Stock which was subscribed for mainly by insurance companies. Thus a total of approximately £60,000,000 was added to the Company's available cash.

This total post-war expenditure of £210,000,000 is indeed a large figure, and we all of us have cause for pride at the manner in which I.C.I. has played its part in expanding the manufacturing resources of this country. We are, however, still far from the end of our capital expenditure programme.

We are already well on the way to completing large expansion schemes to many of our plants which will give greatly increased outputs of alkalis, chlorine, ammonia, fertilizers, ethylene, dyestuffs, nylon polymer and non-ferrous metals, all of which are established I.C.I. products. We have embarked upon the erection of plants to yield for the first time large-scale production of new products such as the fibres 'Ardil' and 'Terylene' which in small development quantities are just beginning to find their way on to the market. We are going to erect plant to produce a considerable quantity of the metal titanium, for which a large modern demand is springing up in connection particularly with jet aircraft engine production. A further large sum will be required in the development of the Wilton site.

More Working Capital

These projects will require over the next few years a very heavy cash outlay. Furthermore, as they come in turn into production, large sums of cash will be needed to finance additional stocks of raw materials necessary to the production and the finished products arising therefrom—in other words, to finance the extra working capital, the need for which always accompanies manufacturing expansion.

As these new plants and extensions come into full operation our earnings will increase. We expect to be able, as we have done in the past, to save within the Company some of these additional earnings to help towards the cost of current construction work, but our cash forecasts which are regularly

made and presented to the Board have shown that Company savings alone will not provide enough, and in the early part of this year the Board considered that we should once again take steps to raise additional moneys from outside sources. Since our efforts are speeding up and our rate of expenditure is increasingly higher, the Board decided on this occasion to ask for as much as £30,000,000.

The next problem was to decide in what way the new money should be found. Strictly, capital expenditure of a permanent nature, such as our expansion programme mostly involves, should be represented by share capital of an equally permanent nature. There is, however, at the present time one very important objection to the issue of either Preference or Ordinary share capital, namely that, because Profits Tax at the rate of 20% is assessed on the gross amount of all dividends paid on both Ordinary and Preference share capital, it becomes a very costly matter to reward the subscribers of such capital and bear at the same time the burden of this high rate of Profits Tax. This penalty does not, however, attach to the interest payable on loans as opposed to share capital.

The Board eventually decided to raise the new money in the form of a medium-term loan of £30,000,000 4½% Unsecured Loan Stock repayable in 1974 or a little earlier at the Company's option. The Board also decided that, on this occasion, instead of placing the stock privately as it had done in 1950 in the case of the 4% Loan Stock, it would invite the existing stockholders of the Company, both Preference and Ordinary, to subscribe for the new loan.

I am of necessity writing before the result of the issue is known; but its announcement has been very favourably received in the financial columns of the press, and we are led to believe therefrom that the issue will be successful. Many of the readers of this article will themselves be stockholders in the Company and consequently would have received the circular letter of 10th March last inviting their subscription to the new loan. Whether or not they have subscribed, they will no doubt have followed with great interest the result of the offer, which will have been published by the time this is read.

Share Capital Structure

The second part of the Company's capital plans deals with the reorganisation of its existing share capital structure and consists in effect of two separate proposals which have been prompted by different reasons.

In the first place it is proposed to issue to the Ordinary stockholders one new share of £1 fully paid for each £1 of Ordinary stock held by them. This is to be achieved by transforming or capitalising £70,651,162 of the Company's reserves into issued share capital, thus doubling the amount of the present issued Ordinary share capital.

The reason behind this proposal is that the actual capital invested in the Company in terms of the value of its plant, equipment and other assets has become in course of time vastly greater than the nominal value of the Company's share capital, and it is desired to correct the anomaly to some extent by bringing the two more closely into line with each other. This wide divergence between the real capital employed by the

Company and the nominal amount of share capital has arisen from the fact that the Company has ploughed back such large amounts of undistributed profits and has not called upon its stockholders to subscribe more than a relatively small proportion of the cost of its expansion.

Indeed, it will be appreciated from what I have said already that, in sinking some £210,000,000 since the war in capital projects of all kinds, the Company has only twice appealed to its stockholders for more money, and, as a result of the two Ordinary share issues mentioned above, has only increased its Ordinary share capital by a little over £20,000,000 nominal.

Anomaly Corrected

It is most undesirable that there should be such a discrepancy between real capital employed and nominal share capital. Such a state of affairs leads to much wrong thinking and misconception, particularly when a company's earnings and dividends, however reasonable these may be, are related to nominal capital which is only a small fraction of the true capital which has been working to earn them. The Board's present proposal therefore to capitalise some £70,000,000 of reserves will, if it is approved by the stockholders, go part of the way to correct the anomaly.

It may be here remarked that, in making this "one for one" scrip issue to Ordinary stockholders, the Company is not parting with any of its wealth to them nor handing out anything which adds to the value of their holdings of I.C.I. stock.

The other proposal contained in the second part of the Company's plans concerns the Preference share capital, and here the intention is that £9,631,078 of the Company's reserves will be capitalised and applied to the issue of two new 5% Preference shares of £1 each fully paid for each £5 of existing 7% Preference stock held. At the same time the rate of dividend on the existing Preference stock will be reduced from 7% to 5%, so that every £5 of existing 7% stock will be replaced by £7 of 5% stock. Each Preference stockholders will thus receive exactly the same total amount of dividend as before.

The chief reason behind the Board's proposal here is that a 7% Preference stock is not regarded as an acceptable security by prospective investors when new capital is required, since among other considerations it would, in a company of I.C.I.'s standing, undoubtedly have to be issued at a premium. It is therefore felt that, by reconstituting our Preference capital as a 5% security, the Board will be in a much better position if at any time in the future it should desire to issue further Preference capital—though it has no such intention at present.

The full details of the Board's plan for reorganising the capital structure of the Company have not yet been communicated to stockholders, and further comment at this time would therefore be premature. It is the intention that the proposals shall be the subject of resolutions of the stockholders concerned at meetings to be held on the same day as the Annual General Meeting of the Company in June next and that further communication will be sent to them in regard to the proposals in sufficient time to enable that to be done.

How the Press received I.C.I.'s reply to 'Challenge to Britain'

Finance and Business *Manchester Guardian* Tel. London City 5050

I.C.I. ANSWERS BACK The Threat of Nationalisation

BY OUR FINANCIAL EDITOR

Imperial Chemical Industries, Ltd., has taken seriously the threat of nationalisation included in the latest programme of the Labour party. This vast industrial enterprise has now issued to its stockholders and workers a commentary on the Labour party's proposals in which a fascinating array of facts is given of Britain's largest industrial company. It meets the nationalisation threat with the view that Government control would "slow down all major policy decisions," that it would "stifle commercial and technical initiative," that research work would not continue "to be so far-reaching and flexible," that the company's overseas interests would be damaged, and that the most enterprising and active members of its present staff "would be tempted to leave."

The Labour party's assertion that the chemical industry must be nationalised because production must expand to keep pace with growing requirements of other basic industries is countered by details of the rapid expansion already achieved since the war and the company's plans for the future. In 1953 I.C.I.'s production of chemical and other products (excluding metals) was approximately 80 per cent greater than in 1946. This is partly the result of a heavy investment programme. Since the war the company has spent some £146.5 millions on new capital construction in the United Kingdom alone. In addition "substantial sums" have been invested abroad through subsidiary and other companies. Of this £146.5 millions, about £49 millions relates to new products, including £12 millions for the preliminary stages of the fibre development programme. The amount to be spent to complete projects which are at present still under construction is estimated at another £60 millions, of which a large share is going into the development of fibres.

Replying to the charge that the chemical industry is under a tight monopoly, I.C.I. admits there is a monopoly in certain products, but points out that some chemicals require a high level of output before they become an economic proposition. "There is no truth," it asserts, "in the implication that the company controls the chemical industry. In terms of labour I.C.I. employs about one-third of the workers in the industry, but it is only one of some 260 firms who are members of the Association of British Chemical Manufacturers." I.C.I. manufactures some four thousand separate products. In some of them it has a monopoly, but it

Daily Telegraph I.C.I. REPLY TO SOCIALISTS

"TIGHT MONOPOLY" IS DENIED

By Our Industrial Correspondent
Imperial Chemical Industries, the £416 million firm, to-day sent to its shareholders and workers a commentary on Socialist state ownership proposals contained in the Labour party's policy statement "Challenge to Britain."

The Socialists threaten, if returned to power, to introduce a substantial degree of public ownership in the chemical industry and to establish control over the industry's investment programme. They also intend to overcome " dangers inherent in private monopoly power."

I.C.I. says that "there is no foundation for the assertion that the chemical industry is under tight monopoly control, although there is a monopoly in certain products." It was inevitable that some firms should specialise in particular products, and also that the production of certain chemicals should be concentrated in a small number of firms.

But there was no truth in the implication that I.C.I. controlled the industry. I.C.I. employed about one-third of the workers in the industry, and was only one of some 260 firms in the Association of British Chemical Manufacturers.

ARGUMENT REFUTED

About the Socialist argument that final decisions are in the hands of private individuals and not of the community, I.C.I. says "the experience of industries already nationalised refutes the argument that the accountability of the chemical industry would be improved by it being nationalised."

"If the development of I.C.I. and similar enterprises were made to fit into an ideological plan, and if priorities were determined by political considerations, the chemical industry and others handled in this way would suffer from unwise direction of investments and the waste of resources in uneconomic schemes. "I.C.I. under private enterprise will continue to be developed upon sound lines based on demand and not upon theories."

Case Against State Control of Chemicals *Birmingham Post* I.C.I. Report

By Our Industrial Correspondent

Reasons why State ownership of the chemicals industry would be against the national interest are advanced in a report prepared by Imperial Chemical Industries for the guidance of stockholders and its 106,000 employees.

Even before the Labour Party, in adopting *Challenge to Britain*, at Margate last autumn as the basis of its policy at the next election, committed itself to "a substantial degree of State ownership," without discussing any specific proposals, the I.C.I. Board had frequently been forthright in its opposition.

In a foreword to the report, sent to stockholders, and available to all employees, Dr. Alexander Fleck, chairman, says the Board remains convinced that State ownership of the company, would be against the long-term interests of the nation as a whole, as well as those of I.C.I., its workers and the customers who use its products.

Slow Down Decisions

He takes the view that in a competitive industrial world, prompt decisions are essential to success. Nationalisation would slow down major policy decisions.

Another reason given for keeping free from Government control is that the company's world-wide export trade and its overseas interests would be damaged because of the dependence on other countries for goodwill and co-operation.

Commenting on the implied suggestion in *Challenge to Britain* that chemicals must be nationalised if production is to expand to keep pace with the requirement of other basic industries, the I.C.I. report points to new capital construction of £146,000,000 in Britain alone in the past nine years, rising to a peak of £30,000,000 last year.

Increased Staff and Output

The number of staff and operatives employed has risen from 92,000 in 1946 to 106,000 last year, and the volume of production of chemicals and other products (excluding metals) rose by 80 per cent over the same period.

After providing figures to show that the industry is catering adequately for the nation's needs and also expanding its export trade, the report outlines the progress made in developing the manufacture of synthetic fibres, and in raising production of plastic materials almost to 100,000 tons in 1952.

Refuting the assertion in the Labour Party's policy document that "at present the chemical industry is under tight monopoly control" and that "final decisions in this vital industry are in the hands, not of the community, but of private

MONEY AND TRADE *Daily Herald* V. J. BURTT

LABOUR'S PLAN ATTACKED

Palmerston House, E.C.2.

London Wall 3431.

THE 350,000 stockholders and workers of the giant Imperial Chemical Industries combine will receive today the company's answer to the Labour Party's chemical industry nationalisation plans, which were given in "Challenge to Britain."

An 8,000-word booklet with a blue cover tells of the vast complexity of the industry. It suggests that any inquiry to determine which section should be nationalised would show the impossibility of making clean cuts.

It also deals with the "Challenge" proposals for developing vital industries with Government money. This, it suggests, must involve still higher taxation, which, it says, is already so severe that neither individuals nor companies are left with sufficient money "to make adequate savings for the requirements of industry."

It scoffs at the nationalised industries which it says "have no undistributed profits to plough

back for development and expansion because they have not been making any."

Yet, apart from millions in reserves, I find in the latest accounts of the Electricity Board some £5.5million carried forward; Gas £1.6million; and Steel £4.9million.

It was only on Saturday that Dr. Fleck announced a 100 p.c. free share bonus involving over £70million of reserves—the biggest ever share-out. He also announced huge plans for development, of which £60million has already been spent, with another £70million to be spent over the next few years.

High taxation has not prevented I.C.I. since the end of the war, spending £210million on expansion, of which £150million has come out of its own resources.

Dr. Fleck in a foreword to his "blue book" tells the workers that the company's good relations with its employees, the conditions of employment, and its pension schemes, could not continue to improve as they have done in the past, if part of the industry were nationalised.

I.C.I. VIEW OF LABOUR'S PLAN FOR CHEMICALS

Glasgow Herald

Take-Over Not in Nation's Interest

FROM OUR OWN CORRESPONDENT : LONDON, Sunday

"The board of Imperial Chemical Industries, Ltd., remain convinced that the nationalisation or State ownership of the company would be against the long-term interests of the nation as a whole, as well as of I.C.I., their employees, and the customers who use their products," states Dr. Alexander Fleck, chairman of I.C.I., commenting on the

Labour Party's programme for a substantial degree of public ownership of the chemical industry as announced in the party's pamphlet, "Challenge to Britain."

In a foreword to "The Chemical Industry and 'Challenge to Britain,'" issued for the information of I.C.I. stockholders and employees, Dr. Fleck says that any substantial degree of public ownership in the chemical industry

Quiet 'Mr ICI' will fight Socialist grab

By PATRICK SERGEANT *Daily Mail* City Reporter

THE £416,000,000 Imperial Chemical Industries begins today a campaign against the Labour Party's proposals to nationalise the chemical industry. It is led by Dr. Alexander Fleck, I.C.I.'s tall, burly chairman, nicknamed the Quiet Man because of his shyness and hatred of publicity.

I.C.I.'s 250,000 shareholders and 106,000 workers get a pamphlet called "The Chemical Industry and Challenge to Britain."

It hits back at the parts of

"Challenge to Britain" (the Labour Party's official programme), dealing with nationalisation of the company.

Moderately and without heat

STATE OWNERSHIP OF CHEMICALS

Financial Times

I.C.I. REPLIES TO THE LABOUR PARTY

By Our Labour Correspondent

Stockholders and employees of Imperial Chemical Industries have been given a 30-page document setting out Imperial Chemical Industries' answer to Challenge to Britain, the Labour Party programme envisaging public ownership of "a substantial degree" of the chemical industry.

The document is a vigorous attack on nationalisation and Government interference in industry. A foreword by Dr. Alexander Fleck, chairman of I.C.I., states that State ownership of

the company would, in the opinion of the Board, be against the long-term interests of the nation and of I.C.I., its customers and its employees.

Competition, says Dr. Fleck, demands prompt decisions, but nationalisation would slow down all major policy decisions. It would stifle commercial and technical initiative and damage the company's overseas interests, so dependent on the good will of other nationals. Good employee relationships could not continue to improve and the quality of the staff would be difficult to maintain.

"NO REALISTIC PLAN" Production Aims

A 22-page commentary on Challenge to Britain then criticises various sections, saying that there is no sign of a realistic economic plan in the programme.

Taking the party's assertion that chemical production must expand, the document comments that between 1945 and 1953 the company spent over £146m. on new capital construction in the U.K. and that the 1953 I.C.I. volume of production of chemical and other products was about 80 per cent. more than in 1946.

The party insists on an expansion of home chemical production to replace imported chemicals, to which I.C.I. replies that in 1952 retained imports of chemicals, drugs, dyes, and colours amounted to £41m., against exports of £138m. and a home production of roughly £600m.

INDUSTRY CONTROL Charge Refuted

The company refutes the implication that it controls the chemical industry, saying it is only one of some 260 firms belonging to the Association of British Chemical Manufacturers, although it employs about a third of the industry's workers.

Counter-attacking on a charge that private individuals and not the community make final decisions in the industry, the document says that the problem of accountability in nationalised industries has yet to be solved and that a statutory monopoly is far more protected from sanctions than any private monopoly.

I.C.I. doubts the possibility of achieving public ownership without disturbing the industry's "smooth functioning." It doubts whether a State-owned I.C.I. would retain the good will of certain Commonwealth countries and the U.S.A., and wonders what would happen to its connections with firms abroad.

Challenge to Britain, it says, shows insufficient realisation of the interdependence and inter-relation of the various sections of the chemical and related industries. The inquiry proposed by the Labour Party to determine the sections to be taken into public ownership would show the immense complexity of the industry and the impossibility of drawing a clear-cut boundary line.

The party's hopes of making sure of investment in vital industries "reveals a misunderstanding of the fundamental nature of the process of saving and investment," the commentary continues.

CAPITAL SOURCES Taxation Effects

Capital can only come from current income and to say—as Challenge to Britain does—that no problem arises in the publicly owned sector of industry is to miss the point that U.K. taxation is "already so severe that neither individuals nor companies have sufficient net income, after tax, out of which to make adequate savings for the requirements of industry."

Still higher taxation to provide further capital for nationalised industries is "a frightening prospect."

THE ORDER OF ST. JOHN OF JERUSALEM

By A. W. Weir (Wilton Works)

Many I.C.I. first aid teams are trained according to the text book of the St. John Ambulance Association. Here is a brief account of this very ancient and interesting Order, compiled from information supplied by the director-general of the Association.

THE origin of the Order of St. John of Jerusalem is very old indeed. It is to be found in the hospice for pilgrims established in Jerusalem in the year 600 on the instructions of Pope Gregory the Great. When the Crusaders occupied Jerusalem in 1099, the hospital was in the charge of a body of Benedictine monks whose rector found great favour with the Crusaders. Under the encouragement of the Crusaders the Benedictine monks were formed into a special order of Hospitallers. This might be called the start of the Order of St. John.

By the end of the twelfth century the military reputation of the Hospitallers stood as high as that of the Templars, another religious military order for the protection of pilgrims to the Holy Land; the hospital in Jerusalem had become a secondary consideration. So it became inevitable that when the Crusaders were defeated in 1291 the Hospitallers should leave the Holy Land too. Together with the Templars, they established convents on the island of Cyprus. This was the first of many changes of residence.

In due course the Hospitallers conquered the island of Rhodes, to which they moved their convent and where they erected a new hospital. They now became known as the Knights of Rhodes. But the Knights of Rhodes did not dominate that island for long. The might of the Turkish Empire was too much for them, and they were compelled by the Turks to evacuate the island. With the loss of Rhodes the Hospitallers established their convent first in Italy, then at Nice, and subsequently on the island of Malta. Known henceforward as the Knights of Malta, they carried on from their new home a continuous warfare against the Barbary Corsairs.

Refuge in Rome

The military history of the Hospitallers ends with the capture of Malta by Napoleon, and from that time onwards the Knights of Malta have devoted their energies to works of charity. For a time the Knights took refuge in Russia, then in Sicily, and finally settled in Rome, where their convent has been established for over a hundred years.

In order to enable the Hospitallers to carry out their military and charitable duties great estates were conferred upon them and to administer these estates they established priories in every country in Europe.

In England in the twelfth century the Hospitallers built a priory at Clerkenwell on lands granted to them. The Order suffered serious persecution under Henry VIII, and its estates were finally confiscated by Elizabeth I, but a series of titular

Grand Priors of England continued to be appointed by the Knights of Malta until, in 1831, the Order was re-established in England.

The restored Order of St. John has always devoted its entire efforts to works of charity. Membership carries with it responsibilities as well as privileges: one of these is to contribute towards its charities.

The restored Order first came under royal patronage when the Princess of Wales, afterwards Queen Alexandra, became a Lady of Justice, but it was not until 1888 that Queen Victoria granted to the Order its royal charter, appointing her eldest son, the Prince of Wales, to be its Grand Prior. Finally, King George V granted the Order a new royal charter, bringing it more into line with the other British orders of chivalry and giving it an imperial organisation under which priories were established in South Africa, New Zealand, Canada, Australia and Scotland.

Objects and Purposes

The chief objects and purposes of the Order are as follows:

- (a) The encouragement and promotion of all works of healing and charity for the relief of persons in sickness, distress, suffering and danger, without distinction of race, class or creed.
- (b) The rendering of aid to the sick and wounded in war and the promotion of such permanent organisations during time of peace as may be at once available in time of emergency.
- (c) The award of medals, badges or certificates of honour for special service in the cause of humanity.
- (d) The maintenance of the St. John Ophthalmic Hospital of Jerusalem.
- (e) The maintenance of the St. John Ambulance Association.
- (f) The maintenance of the St. John Ambulance Brigade.

After a lapse of 694 years the Order of St. John returned to Jerusalem, its birthplace, and restarted the hospital which gives its name to the Order. Patients come for treatment from all over Palestine, Transjordan, Cyprus, and almost all the eastern Mediterranean countries. They have been known to walk or donkey-ride over a hundred miles. Students of ophthalmology sponsored by their governments attend courses at the hospital to study the great variety of eye diseases prevalent in the Middle East.

The St. John Ambulance Association was founded in 1877 with the primary object of giving instruction in first aid and home nursing. It is to this Association that our first-aiders owe so much.

PHILLUMENY

By H. Earnshaw (General Chemicals Division)

Phillumeny is the love of matchbox labels. In the space of eight years the author's collection has reached the huge total of over 11,500 different labels. He collects from friends all over the world.

A PHILLUMENIST is a collector of matchbox labels, and the name is taken from the Greek *philos* (loving) and the Latin *lumen* (light). To me the hobby has a tremendous fascination. In addition to the joys of acquisition and collecting, there is one particularly delightful aspect—the making of friends in all parts of the world as a result of the exchange of letters and labels at regular intervals throughout the years.

Broadly speaking, there are two types of match containers—booklets and boxes. Some collectors concentrate on one type only, while others collect both. My own collection contains matchbox labels only and numbers over 11,500 different labels from 65 countries.

Figure 1 is one of many special labels issued to commemorate the Coronation. It is from an Italian spring-flap matchbox. Over the years there have been many labels portraying royalty, and figures 2 and 3 are examples of these. They are Czechoslovak and were issued early this century.

Religion too has its place, and references to both Christian and pagan faiths are to be found on matchbox labels. Figure 4 shows a Japanese label called the Virgin and Child which was produced for sale in Christian countries but was banned after a very short life.

There was a time when matches were a newfangled idea, and the packets or boxes had to carry instructions on how they should be used. One such label is figure 5.

Festive occasions of all kinds are depicted on matchbox labels. Figure 6 is a Czechoslovak label, "The Christmas Tree." Political events are also commemorated, and figure 7 is a current Indian label (one of many) on the partition of India and Pakistan. Other Indian labels bear the date 15th August 1947 and the words "Dawn of Independence," and one is a picture of Mahatma Gandhi against a background of Indian flags.

Figure 8 is an Indian label with a strong Kipling connection. It refers to the jungle story of how the elephant got its trunk. Figure 9 is a Finnish label showing a Viking burial. The body was placed on a boat, set alight, and allowed to drift while salutary fires were lit ashore.

Between the wars Japan produced many labels, and often they were unashamed copies of popular European brands. Some labels were well executed in design and production, but others were crude and even consisted only of a rubber stamp impression. One label bears the phrase "Average Contents Not More Than 50" while such phrases as "Sure Best Match" and "Pure Safety Match" are common. Figure 10 is based on a common Swedish type label but with Japanese wording.

During the second world war many labels were issued for propaganda purposes, and figures 11–13 are typical examples. The Belgian underground movement made matches bearing the label in figure 11. Figure 12 is a German label warning against careless talk, and figure 13 is a Japanese war propaganda label. These latter labels are very scarce and are keenly sought by collectors.

Even in peacetime labels are commonly used for propaganda, and figure 14 is a current German label depicting the Colorado beetle. Figure 15 is a Dutch Flood Relief Fund label which was issued within a week or so of the disastrous floods in February last year. Normally the price of matches is 2.5 cents per box. But in this case the price is 3 cents, the difference being paid to the Flood Fund. Figure 16 is of Belgian origin and is an example of commercial advertising.

Many labels form complete sets. Figure 17 is one of a Swedish set of ten. Figure 18 is from a set of twelve showing famous buildings in Prague and is of Czechoslovak origin, while figure 19 is from an Italian folklore set of six. Figures 26 and 30 are Swedish miniatures—figure 26 from a pygmy set of ten which was issued in 1890, and figure 30 from a national costume set of eight.

Many prominent persons have their own personal matches. These are often of the booklet type, but some prefer the box type. Figure 31 is the private matchbox label of the Swedish legations; figure 32 is the private label of the Ethiopian royal household and depicts the Lion of Judah; figure 33 was the personal label of Eva Peron until her death in 1952; and figure 34 was the private label of the royal household of King Farouk of Egypt until his abdication.



Fig. 2

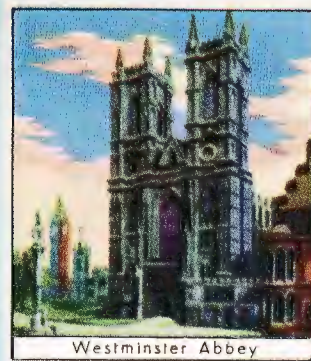


Fig. 3



Fig. 17



Fig. 18



Fig. 19



Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 20

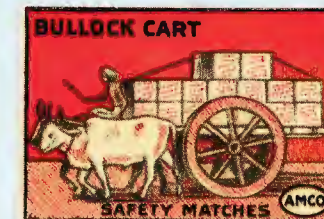


Fig. 21

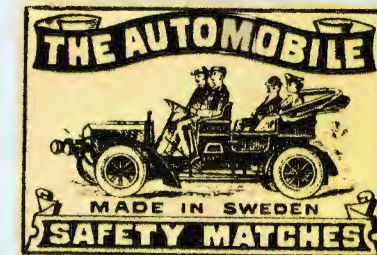


Fig. 22



Fig. 8



Fig. 9

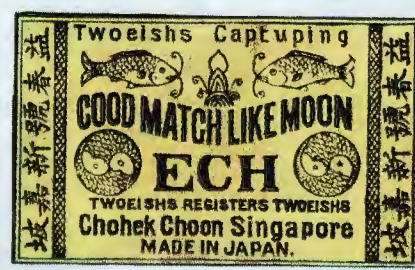


Fig. 10



Fig. 23



Fig. 24



Fig. 25



Fig. 11



Fig. 12



Fig. 13



Fig. 26

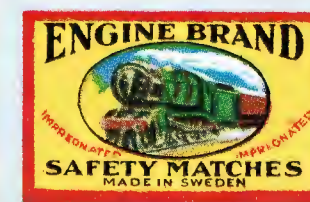


Fig. 27



Fig. 28

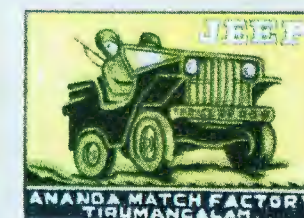


Fig. 29



Fig. 30



Fig. 14



Fig. 15



Fig. 16



Fig. 31



Fig. 32

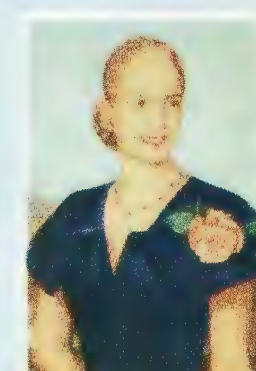


Fig. 33



Fig. 34

BROOKLANDS

By P. C. Allen (Director, Group E)

Before the war Brooklands was the Mecca of the racing car world. There the famous drivers of those days competed in an atmosphere of originality and enthusiasm: Kenelm Lee-Guinness, the famous "K.L.G.," Parry Thomas in his huge white Leyland—these and other characters are recalled in a vivid sketch of those bygone days in the quest for speed.

Reproductions by courtesy of The Autocar and The Motor Cycle

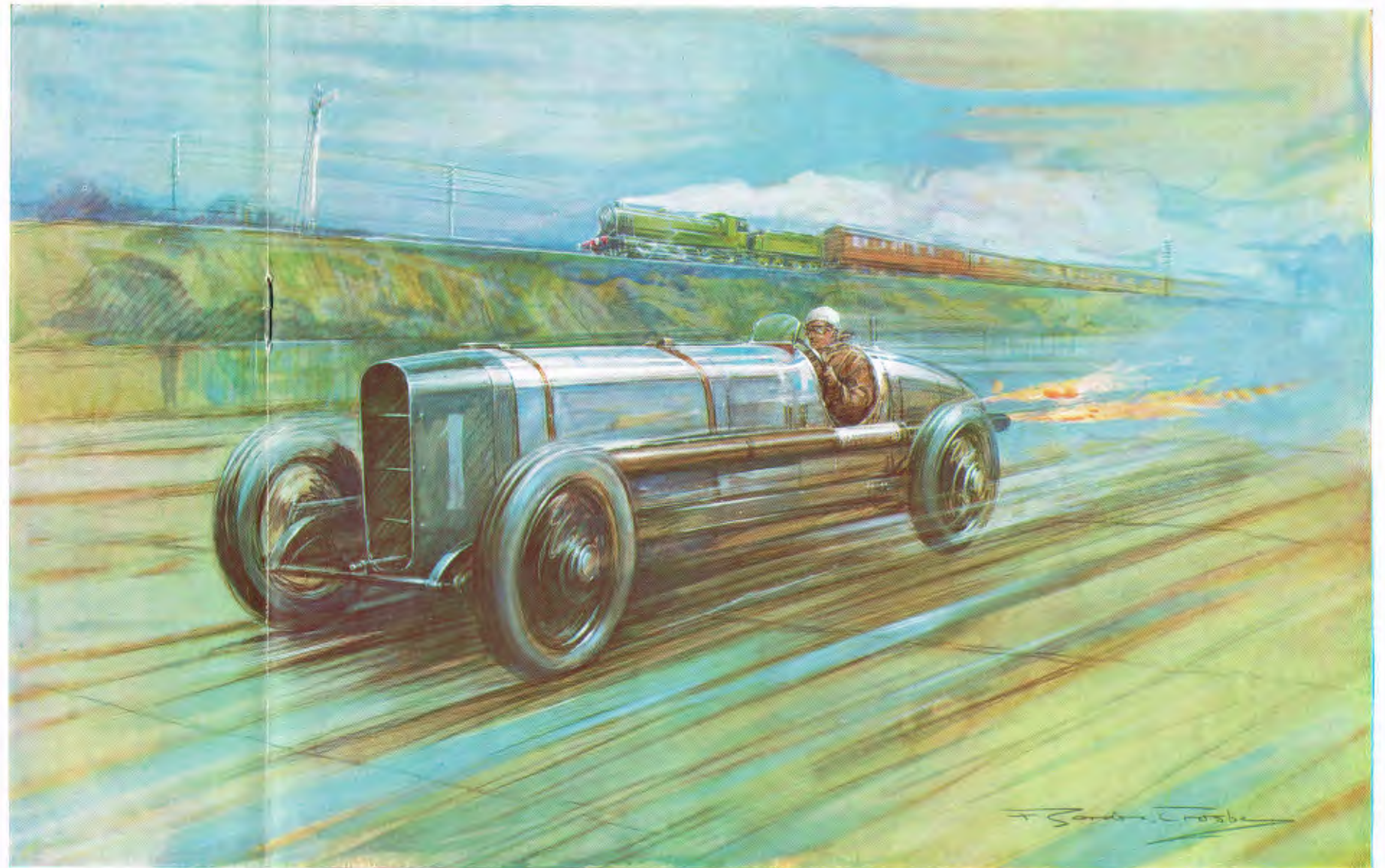
THE other evening I was driving out to Welwyn. I was tired, the day had been trying and the rush hour traffic was abominable. Then suddenly, just as I had rounded Apex Corner, there was a noise like the hammering of a rivet gun and a young man on a Norton swept past me, leaving behind a trail of that unforgettable bitter-sweet smell of burnt castor oil. And instantly in my mind I was back thirty years and a boy again, standing on the glaring concrete of Brooklands track while a racing motor cycle roared across the space by the black aeroplane sheds, its rider flat on the tank, swung up the slope and round the banking by the Members' Hill, leaving that

evocative scented smoke hanging in the air; Denly on the Norton was after the hour record again.

Brooklands track at Weybridge, which was one of the casualties of the second world war, was a very strange place in many ways. It was much more than a place of spectacular entertainment: it was also a testing ground and a home of records and research.

Indeed, from the spectators' point of view it was not particularly good: the track was too big—nearly $2\frac{3}{4}$ miles round—and the ground too unaccommodating for crowds to see at all well.

No, Brooklands was really a place for the illuminati, and they loved it with an abiding affection. It is true that big crowds came to the Bank Holiday race meetings, superb cars filled the parks, and spectacular girls adorned the paddock; bigger crowds still turned out when a Grand Prix or long-distance race had been well advertised. But the charm of Brooklands for me and many others was at the smaller Saturday meetings, when everybody knew everybody else, including the handful of bookies (Long Tom,



"Perhaps the most splendid of all the Brooklands cars was the great single-seater twelve-cylinder Sunbeam"

(Painting by Gordon Crosby)



"Among those who raced for the sheer fun of it was Lord Howe"

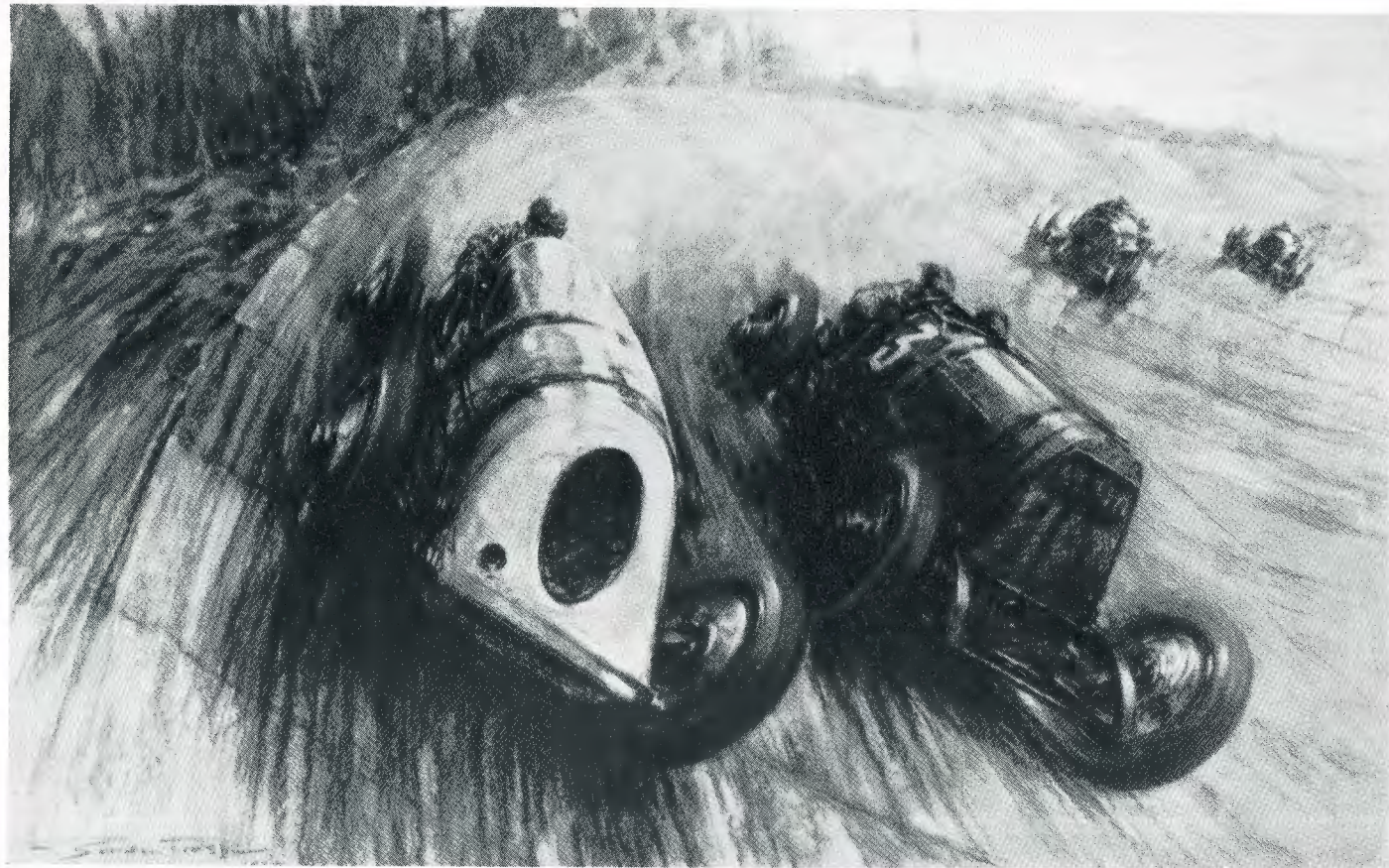
Harry White and Jack Linton of London, I recall even now), or even on weekdays, when there was no organised meeting at all but machines were being tuned or records attempted. Then sometimes half a dozen of us would see some great moment, as in April 1921, when 100 m.p.h. on a motor cycle was first attained in this country, the climax of days of struggle between the Indian and Harley-Davidson teams. Then later came the first time that 100 miles were crammed into an hour on a motor cycle, and then there was the perpetual struggle for the 500 c.c. hour record between half a dozen makers.

The motor-cycle racers were a group apart from the car men, and they in turn a different group entirely from the members of the Flying Club, whose premises were right at the far side of the concrete oval. I never had any interest in the flying side; I thought then, and think now, that to leave the ground at all was slightly miraculous, but

for several years I belonged, first to the motor-cycle club, and later to the car club.

It is hard to say which was more glamorous to a boy. The motor-cycle racing, whether solo or with sidecars, was in some ways more spectacular, for man and machine both visibly had a part in the race, and trackcraft and tactics were obvious. To see two fast men ride for three laps shoulder to shoulder, arms at full stretch, bodies flat on the tank, heads down to the handlebars—like the famous race between Lacey and Staniland, which was won by three inches after $8\frac{1}{2}$ miles at 105 m.p.h.—was to see speed indeed.

But somehow, enjoyable as the motor-cycle racing was—and watching, say, Baldwin on the big eight-valve Matchless, or Joe Wright on the Zenith, and later Pope and Fernihough on the Brough Superiors, high up on the banking of the track under the Members' Bridge really



(Painting by Gordon Crosby)

"To see one of the great Leylands competing with Eldridge's vast pre-war Fiat was like seeing lightning against thunder"

did give a thrill—one always felt that Brooklands was less the headquarters of British motor-cycle racing than the Isle of Man. With cars it was different, for road racing was extremely limited in the British Isles between the wars. So almost until World War II Brooklands was the place where the big car races took place, the British Grand Prix, the 500-mile race, the Junior Car Club 200-mile race, as well as the ordinary members' meetings throughout the summer.

The week before one of these big races was a period of mounting excitement as the factory teams and the independent drivers came in to practise and tune up. There were always some amateur optimists entered in these great races, and Brooklands would have been a much poorer place without them. As often as not they finished the day early with expensive noises issuing from the motor. The factory teams, of course, were much more professional, but they varied in strength and efficiency, with the famous Sunbeam-Talbot-Darracq team under Louis Coatalen at the top.

The S.T.D. outfit was highly organised and efficient, with Major Segrave and Kenelm Lee-Guinness, the famous "K.L.G.," as its most distinguished regulars; usually for a big race, like the 1500 c.c. 200-mile race, they

took in temporarily a third member, often George Duller, the steeplechase jockey, or else they brought over one of the French drivers like Albert Divo or the minute Moriceau, whose front axle once broke at 120 m.p.h. on the Byfleet banking. This team always ran under strict discipline, with the order of finishing laid down, so that often they ran the whole race as if tied together, ending the last lap as they had finished the first.

The French were invariably a most picturesque addition to Brooklands, with strangely cut brown boots and their caps on back to front. By no means all the Frenchmen were associated with the S.T.D. team: Bugatti and Delage sometimes sent over cars, and so did Amilcar and Salmson in the smaller classes, and once in a while a fierce factory Ballot would be entered with Jean Chassagne to drive.

Brooklands certainly had its personalities from the very earliest days, starting with S. F. Edge, who drove his Napier single-handed for twenty-four hours in 1907 to set a bookful of world records, and Percy Lambert, the first man to cover 100 miles in the hour on the track, who was killed there in 1913. The gifted or gilded amateurs or even shamateurs, as some were alleged to be, were often the most colourful, if not the most efficient. They were mostly concerned with having fun or a thrill which they could

afford—for after all in the twenties it was not a crime to be rich—rather than worrying themselves about improving the breed, devising new kinds of four-wheel brakes or investigating the behaviour of tyre treads.

Among those who raced for the sheer fun of it were Woolf Barnato, Billy Cotton the band-leader, George Duller, Lord Howe, Dr. Benjafield (all too often described as "the sporting medico") and the Howey brothers, one of whom was later killed in France in a hillclimb, while the other became the moving spirit behind the Romney, Hythe and Dymchurch light railway. Perhaps most picturesque of all was the Russian Count Louis Zborowski with a sardonic black moustache, who drove some quite immense machines like a huge pre-1914 Benz with chain drive and a top gear ratio of 1 to 1 or near it, and a monster with an engine out of an old Zeppelin which he called the "Chitty-Bang-Bang"—and it was so entered in the programme. The Count, alas, was also killed, though not at Brooklands, where comparatively few perished—but in Italy in 1924, when he was driving a Mercedes, a marque on which his father also lost his life some years before the first world war.

Another great Brooklands personality, who met his end attempting the world's land speed record on Pendine sands, was Parry Thomas, a melancholy-looking man, but a great driver who would pilot his huge white Leyland-Thomas round the very rim of the track within inches of the edge. Once he removed a bush from the top of the banking, and who shall say whether his wheels were on the edge then or over it? Thomas was much more than a great driver, for he was a magnificent engineer: in addition to many inventions for the industry, he produced some small low-slung "specials" which were very fast. He must also have been a man of picturesque and original outlook, for he once enlivened a local dance with a yellow watered-silk waistcoat at a time when the rest of the world's thinking had not got beyond white piqué.

If there were personalities among the drivers there were certainly personalities among the cars also, those that were pure racing cars like some of the big fellows, or those which were adapted for track racing like the big Bentleys or the minute Austin 7's. Incidentally, it still seems to me almost incredible that an Austin 7, a "special," to be sure, averaged 90 m.p.h. for 500 miles as long ago as 1931.

A great Brooklands car was the old Lorraine-Dietrich of 1911 or 1912, a splendid robust machine which continued as fast as ever well into the thirties, capturing some

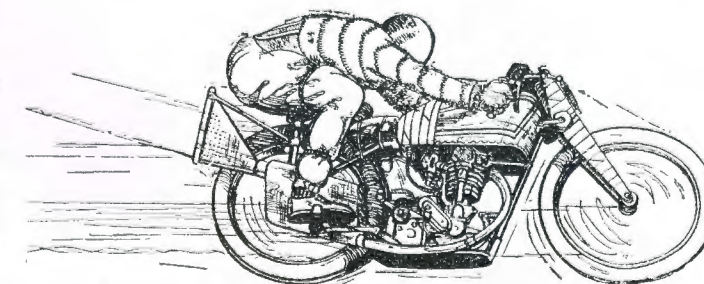
world records when it was nearly twenty years old; with a giant four-cylinder engine of 15 litres, a fine contempt of streamlining, a big round petrol tank over the back axle, with plenty of brasswork and a chain drive, it was the epitome of the classical racing car of a bygone age as it thundered—for no other word describes its noble exhaust—out from behind the Members' Hill and down the railway straight, putting to contempt the paltry speed of one of the Bournemouth two-hour expresses of the London and South Western Railway. Then the great white Leylands of Parry Thomas which flew round the top of the banking like great ghosts, strangely silent and almost malignant in their quiet speed, were the children of Brooklands and nowhere else. To see one of the great Leylands competing with Eldridge's vast pre-war Fiat of 22 litres was like seeing lightning against thunder.

Perhaps the most splendid of all the Brooklands cars of the post-war era, or at least of the twenties, was the great single-seater aero-engined twelve-cylinder Sunbeam of 18 litres—a superb car which could travel as fast as 150 m.p.h. and was the first car to lap Brooklands at 120 m.p.h. Like many a fine piece of machinery it was somewhat temperamental, and going down to the Fork, where the races started, it always carried three mechanics sitting precariously on the tail in case it should stall and have to be pushed to start the engine again.

In the 1920's much less was known about tyre construction than is known now, and much research was done by Parry Thomas to improve tyres. The big Sunbeam deployed too much power for the tyres of its day, and, while it could be relied on for a couple of laps at top speed, it often shed a back wheel tread on the Byfleet banking on the third lap and ended the race on the rim with a mass of cordage wound round the axle. Luckily the big car was reasonably docile during these difficult moments, and K.L.G. was always able to bring her safely to a standstill.

Well, I suppose on a dark autumn evening Brooklands is now a place of ghosts; the concrete banking is still there, as anybody going to Southampton or Guildford by train can see, though trees are forcing their way through the surface, and perhaps the wraiths of Parry Thomas or S. F. Edge or Herbert Levack now haunt it. The buildings

are still there, slowly, slowly rotting away. With them, I wonder, is there still that plaque of brass once kept bright and shining which proclaimed—how did it go?—"On this track the late Percy Lambert first covered 100 miles in one hour on a 25 h.p. Talbot, February 15th, 1913?"



"Denly on the Norton was after the hour record again"



(Photograph by Charles Wormald, The Kynoch Press Studio)

GEOFFREY HADMAN

TO most of the I.C.I. people who live clustered together in mid-Cheshire Geoffrey Hadman, works manager of Fleetwood Works, seems to be the reincarnation of the Commander of the Legionaries on Hadrian's Wall, spending his time subduing by force of character as much as by anything else the turbulent tribes that live in the extreme north. The rest of his time he spends descending on the fleshpots of headquarters like an enormous but genial bear.

An East Country man by birth and breeding, he is one of those fortunate people who combine brain and brawn. Leaving Stamford School for St. John's College, Oxford, with an open scholarship, he soon collected the Goldsmith's exhibition in chemistry and the Casberd scholarship as well. In 1932 he emerged with a first-class degree in science. The speed that enabled him to evade the proctor's bulldogs got him a trial in athletics, though finally he just missed his half-blue for the quarter-mile. His bulk got him into his college rugby XV, and his complete indifference to physical pain got him into the hockey side as well. His innate *joie de vivre* saw to it that

he was a fine sprint swimmer of near-University standard.

A few months after leaving Oxford he found himself in the research laboratory at Winnington. Many first-class scientists soon settle down to enjoy the cloistered academic atmosphere of such institutions for the rest of their lives, but not so Geoffrey Hadman: with his immense capacity for getting on with everybody and getting things done he was an obvious choice for the works. After a young managers' course at Lostock he emerged with a high pass and a commission on the Fleetwood Roman Wall, where he went in November 1933.

His works, his aircraft, his home, his shooting, and his farming interests might completely occupy a lesser man than him, but above all he finds time to crack a joke with his friends—and he has many, from Gamble Road to Belgrave Square. For the rest, he allows legend to build up around him (after all, he is the only member of I.C.I. that has ever shot a codfish with a twelve-bore), smiling benignly at the stories of his terrible rages that almost out roar the great industrial lion, Ludwig Mond.

I.C.I. NEWS

HILLHOUSE WIN FIRST AID TROPHY

HILLHOUSE Works of Plastics Division won the I.C.I. First Aid Competition in London on 11th March. Last year's winners, Gaskell-Marsh (General Chemicals), won second place, and Lostock Works (Alkali) were third.

Improvisation was the keynote of this year's competition, and it was the ability to make do with odds and ends that "happened" to be lying near the scene of the accident that brought in the crucial marks in both the individual and team tests. The absence of standard first aid equipment in the individual tests was a complete break with tradition, and brought the tests (as the examiner remarked afterwards) much closer to real-life conditions than hitherto. Standard equipment was available in the team test, but here again it could only be used to the best advantage if intelligent use was also made of odds and ends.

Mr. R. A. Banks (Personnel Director) pointed out at the prizegiving that once again a record number of teams had entered for the eliminating rounds of the competition. For the first time since 1937 a ladies' team, from Westquarter Works of Nobel Division, had reached the final. They had not shone this time; but next year, said Mr. Banks, perhaps they would win the competition—and it would be a very fine thing if they did.

The individual tests were judged by Dr. J. B. Marshall, M.R.C.S., L.R.C.P. In the first (the captain's test) a worker had been cycling along the factory road when he skidded and fell, injuring his right ankle. His right fibula was fractured. Apart from anything else there was a difficult decision to be made here as to whether the leg should be withdrawn from the bicycle or vice versa.

Case No. 2 was that of a man who had fallen from scaffolding. He was found unconscious on the concrete below, bleeding from the nose, both ears and the mouth, and with one eye bloodshot. Diagnosis: base of skull fractured.

In the third test a woman was found groaning on the floor, surrounded by the debris of a tray of tea, hot water and mugs she had been carrying. She had slipped and burned both legs.

An electrician was the fourth victim. Called in to

investigate a fault in a motor generator, he had removed the covers of both the high and low voltage ends but omitted to isolate the motor by means of the wall switch. His right hand had come in contact with the high-voltage terminals, and he had received a shock which rendered him unconscious. He was found lying on the floor, his hand still touching the high-voltage terminals, not breathing, and with an electrical burn on the right hand.

The standard in these tests, said Dr. Marshall, was in general extremely high. Competitors had improvised well in the absence of standard equipment, and their telephone messages had been well delivered. One general fault was the tendency to cover the patients with blankets or coats while forgetting to put anything *underneath* them, which was much more important.

Dr. J. E. Haine, M.D., Ch.B., chief medical officer to the Casualties Union, found much to praise in the teams' performance in the team test and considered the standard to be high. The incident to be dealt with had occurred at a point in a works where a road crossed a railway line. A labourer pushing a four-wheeled truck loaded with drums of calcium carbide had been chatting to a workmate who was walking beside him carrying a bucket of water.

The end wagon of a train being shunted down the line ran into the truck, throwing the labourer clear, with minor injuries, but seriously injuring his friend.



The captain of the winning team, Mr. A. Naylor, receives the trophy from Mr. R. A. Banks



Left: The Hillhouse team with the men who helped them win—their Division labour officer, works labour officer, safety officer and medical officer. Right: The Lostock Works team give first aid to two men knocked down by a railway wagon.



At this point the team came on the scene. They were confronted with "red herrings" in the shape of a guilty shunter who made off with much noise and confusion to explain to his boss how the accident happened, and the generation of acetylene gas from the mixture of water and calcium carbide.

None of the teams allowed themselves to be sidetracked for long by these diversions and made the most of their twenty minutes in giving first aid to the injured men—one with lacerations, moderate haemorrhage and shock, the other with his spine fractured in the upper dorsal region and severe shock. To help them a full first aid kit was available, as well as certain other material lying about the stage.

Dr. Haine praised the efficiency of the team captains but urged them to reconnoitre the scene more thoroughly before leading their team into action. A moment's consideration would often tell them—as in this case—that the most articulate man was not likely to be the most severely injured.

He criticised the pulse-taking and the lack of conciseness in framing telephone messages for help, and urged team captains to concentrate their energies on directing the work and giving

orders rather than on practical work. "Above all," Dr. Haines said, "remember that these casualties are alive and need reassurance. Talk to them, get them to tell you about their homes and families—which is useful information for you to have in any case."

The day ended with the prizegiving, at which for the first time prizes were awarded instead of medals and the members of the third team as well as the first and second each received a prize: dressing cases for the first team, hairbrushes in cases for the second, and leather hold-alls for the third. The judges, the "casualties" and the members of Central Labour Department who organised the competition were thanked for their work, and the teams went off to dine at the Criterion and visit the Palace Theatre to see *The Love Match*.

DR. R. HOLROYD

Dr. R. Holroyd, I.C.I. Research Director, has been appointed chairman of the Food Investigation Board of the Department of Scientific and Industrial Research.

The Food Investigation Board investigates the properties and behaviour of foodstuffs and the engineering problems concerned with their handling. The practical aims of its research activities are to improve the quality of foodstuffs and reduce the cost to the consumer by investigating wastage and by improving the practices of storage, transport and processing.

Dr. Holroyd's term of office is five years.

CALLING ALL SAILORS

Two keen sailors in the Company, Mr. R. C. W. Brownsdon of Kynoch Works, Metals Division, and Mr. O. P. Grenfell of Wilton Works, are anxious to start an I.C.I. Sailing Association. They point out that the rising cost of buying and maintaining a boat means that fewer and fewer people are able to take an active interest in sailing, and that potential new recruits to the sport are scared off by its expense.

Their idea is that if enough people interested in sailing could be discovered in I.C.I., a modest subscription to an I.C.I. Sailing Association would make it possible to purchase and

maintain a suitable vessel. She would probably be kept at first in the Solent area, where she could be reached in a few hours' travelling time by people as far north as the South Midlands. After a year's trial the boat could be sailed to the Clyde, or for that matter to the North Wales coast, where again large numbers of I.C.I. people would be able to reach her fairly easily. In their rosiest daydreams Mr. Brownsdon and Mr. Grenfell visualise two vessels, one stationed in the south and the other in the Firth of Forth or Clyde—but that is only a daydream.

Until they know what response their idea receives they prefer not to forecast what the probable subscription to the association would be, but point out that the greater the response, the lower the subscription. A fee for each day's sailing, to cover day-to-day expenses such as food, petrol, harbour dues and so on, would also be necessary; they estimate it at £1 per head.

Mr. Brownsdon has sailed for many years, chiefly from the Isle of Wight, and now belongs to the Midland Sailing Club, which provides dinghy sailing at week-ends. Mr. Grenfell belonged to the same club before moving to Wilton, but he finds the north-east coast inhospitable to small boats and is having difficulty in finding suitable waters for sailing.

Mr. Brownsdon and Mr. Grenfell are anxious to hear from people in I.C.I. who share their interest in sailing and would like to form an I.C.I. Sailing Association.

ALKALI DIVISION

Winning Girl may be Soccer Queen

The Football Queen of Great Britain, to be chosen at the Empress Hall, London, on 30th April, the eve of the Cup Final, may be a member of Winnington Distribution Department. Two girls from the department, Miss Ruth Charlton and Miss Eileen Haspell, were chosen from among other competitors to go on to the final of the Football Queen Competition at a Northwich football supporters' dance. The judges there were Bert Trautmann and John Savage, goalkeepers of Manchester City F.C.

Miss Charlton, an 18-year-old Hollerith operator, won the Northwich competition. She takes a keen interest in the sport she may one day "rule," Everton being her favourite team.



(Photo: Peter R. Sumner)
Miss Ruth Charlton (right) and Miss Eileen Haspell with Manchester City goalkeeper Bert Trautmann

Miss Haspell, the runner-up at Northwich, is a typist in the machine room. She watches local football on Saturday afternoons when she is not keeping goal for the Winnington Ladies' Hockey XI. Her interest in soccer has doubtless been encouraged by her father, who trains the Division's junior football team.

BILLINGHAM DIVISION

Mr. H. J. Tortise

By the sudden death on 12th February of Mr. H. J. Tortise, Billingham staff manager, the Division has lost a valued member of its senior management and many of the staff a good friend.

Mr. Tortise, who was 59, joined the Company in 1928, and all his service had been with the Billingham Division.

He was an engineer, and early in his career he spent some time as a maintenance engineer in the Mine and in Ammonia Works, but for most of the pre-war years he was on the commercial side and at the outbreak of war was export superintendent. On his return to Billingham in 1945 he was appointed staff manager.

Mr. Tortise had a distinguished army career. He served through the first world war, was a colonel at 22 and was awarded the D.S.O. and Bar. Between the wars he was an active Territorial Army officer, and he saw active service again throughout the second world war, being among those who were evacuated from Dunkirk. Later he became largely responsible for the organisation and maintenance of the country's anti-aircraft defence batteries. In 1945 he was awarded the T.D. and the O.B.E.

After the war he continued his interest in the Territorial Forces and was a member of the North Riding and Durham Territorial Associations.

He leaves a widow and a son and daughter.

Mr. C. M. Wright, Division personnel director, writing in the *Billingham Post*, said of Mr. Tortise: "He played a very full part in building up that spirit of friendship which undoubtedly exists in this factory and of which we are rightly proud, and his passing leaves a gap which will not be easily filled."

Roller-skate Champion wins Again

Sheila Gardiner, the British roller figure skating champion, added another British title to her list when she won the women's quarter-mile speed championship from thirty-one contestants at Bradford on 20th February.

Miss Gardiner, 18 years old, is a shorthand-typist in Labour Department.

To win the speed title she defeated Pat Kirkham, a Birmingham girl, who is British and international speed record holder for the quarter-mile, half-mile, and mile.

As one of the Bradford speed club team she has also won the ladies' half-mile race for the Asple-Struggles national speed skating trophy.



Miss Sheila Gardiner

Team	Team Test (200 marks)	Individual Tests (200 marks)	Combined Tests (400 marks)
1. Plastics (Hillhouse) ..	165	146	311
2. General Chemicals (Gaskell-Marsh) ..	154	149	303
3. Alkali (Lostock) ..	141	150	291
4. Salt (Winsford) ..	146	138	284
Wilton (Plastics) ..	155	129	284
6. Paints (Slough) ..	125	144	269
7. Lime (Buxton) ..	123	144	267
8. Billingham (Casebourne-Mine)	125	141	266
9. Dyestuffs (Huddersfield)	118	138	256
10. Metals (Kynoch) ..	132	112	244
11. Leathercloth (Hyde) ..	102	110	212
12. Nobel (Westquarter Ladies)	Not marked	100	Not marked

Training and practice—the less glamorous side of any sport—are essential for success. Miss Gardiner's two weeks' annual holiday is being spent at Bradford with her trainer, Mrs. Rhoda Hargreaves, a former British professional champion in both figure and dance skating from 1949 to 1951.

Under her guidance Sheila will spend seventy hours each week—nearly twice as long as her average working week—in perfecting her skating.

Almost every night for the past two months Sheila has run a mile from the Albert Park cenotaph to her home in Marton Grove Road, Middlesbrough, on her way home from work. She travels to Bradford each week-end to spend Saturday and Sunday training.

Synthonia Hall to be Rebuilt

The main hall of the Synthonia Club, severely damaged by bombs in 1942, is to be rebuilt.

The club has waited for five years for Board of Trade permission to undertake the work. Since then rising prices have



The bomb-damaged hall at Synthonia Club, soon to be rebuilt

swollen the original estimate of £45,000 to £65,000, of which £21,400 will be paid by the War Damage Commission.

The hall was recognised before the war as one of the finest in the area. It was in constant use from the time it was built in 1930 until the night in 1942 when a bomb wrecked the stage end of the building. It was not until temporary repairs had been made in 1951 that any use could be made of the premises that remained.

Billingham Rugby Record

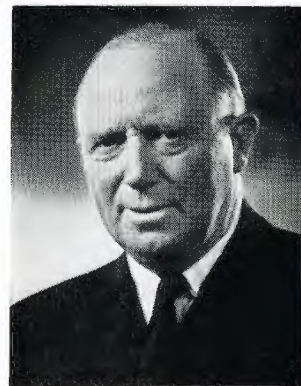
The inclusion of Bruce Neale in the Combined Counties rugby XV which played the All-Blacks at Bradford on 6th February made Billingham the only Durham club to have been represented in each of the combined counties matches against tourists since the war.

Joe Best was in the team which met the Kiwis in 1945; both he and Eric Goddard played against the Wallabies in 1947, and Bob Malpas was chosen for the side which met the South Africans in 1951.

C.A.C.

New Chairman for Plant Protection Ltd.

Mr. T. Ainslie Robertson retired from the chairmanship of Plant Protection Ltd. on 31st March. He is succeeded by Mr. E. M. Fraser, who will continue to hold the position of I.C.I. Sales Controller.



Mr. T. Ainslie Robertson

Mr. Robertson was largely responsible for the agreement between I.C.I. and Cooper, McDougall and Robertson which led to the formation of Plant Protection Ltd. in 1937. As managing director of Plant Protection from then until 1943, when he became chairman, he was responsible for its early organisation as an active force in the field in which it is now such a familiar name. No difficulty deterred him during those formative years, and he was sustained by an unshakable faith in the immense possibilities of the enterprise. This belief has never wavered and has continuously encouraged those who have been associated with him.

As chairman of Plant Protection he has been particularly interested in the development of the export trade and has been personally responsible for a large part of the Company's recent expansion overseas, particularly in Canada, the United States, France and Italy.

Mr. Robertson began his career after leaving St. John's College, Oxford, as private secretary to Sir John Brunner, founder of Brunner, Mond & Co., and he was subsequently in government service as private secretary to the Governor of North Borneo.

After the first world war, in which he served in the Royal Artillery, Mr. Robertson joined the family business of Alex Robertson & Sons, which subsequently became part of Cooper, McDougall and Robertson Ltd., for which he was managing director in South Africa from 1928 to 1933.

He has recently accepted the Minister of Agriculture's invitation to be the first chairman of the governing body of the new Glasshouse Crops Research Institute, and will continue in this office. He remains a director of Cooper, McDougall and Robertson.

P.P. makes War against £5 million Pest

The flea beetle, sometimes called black bob, turnip fly or simple "the fly," has the reputation of being one of the most expensive pests in British agriculture. Every year it destroys some £5 million worth of field brassicas—kale, turnips, swedes, cabbage and rape—from a crop with a potential value of £60 million. This represents the loss of 100,000 acres out of 1¼ million.

Plant Protection Ltd. has now brought new hope to farmers who sow field brassicas, with a seed dressing called 'Gammasan.' It is the first dry seed dressing produced for protecting brassicas against flea beetle and has many advantages over previous methods.

Up to the present farmers have applied BHC or DDT insecticides to the brassica seedlings as they emerged from the ground. The dust or spray has had to be applied at exactly



A dramatic illustration of how 'Gammasan' controls flea beetle. Brassica plants from treated (left) and untreated seed.

the right time to prevent the entire crop being lost and subsequent sowings wiped out. Research carried out by the National Agricultural Advisory Service and Plant Protection showed that dressing brassica seed with 'Gammexane' gamma-BHC considerably reduced flea beetle damage, giving complete protection during the vital period when the seedlings are emerging from the ground and up to the first rough leaf stage.

'Gammasan' also gives some protection against wireworm and contains thiram (TMTD) fungicide, which gives a measure of protection against foot rot. Seedlings from 'Gammasan'-treated seed emerge more quickly than if untreated, and consequently there is a reduction in weed competition. The seedling rows are clearly defined, and the farmer can therefore carry out inter-row cultivation early and easily.

'Gammasan' has been welcomed enthusiastically by farmers, who find that they can now insure against flea beetle for as little as 6s. an acre.

Another use for 'Gammasan' is against carrot fly. Early-sown carrots are protected for up to 4-5 months and late-sown carrots for up to 2-3 months.

DYESTUFFS DIVISION

George Ainley Prize

A pleasing ceremony took place on 2nd February at the Foremen's Council Meeting at Huddersfield Works when Mr. R. S. Wright, works manager and president of the Foremen's Association, presented the George Ainley prize for 1953, a cheque for £5 and a certificate of merit, to the best apprentice of the year, Mr. G. A. Johnson of the Instruments Section.

The cheque is to be spent on books or instruments to assist the winner in his studies.

The prize is named after an engineering foreman who lost his life during the evacuation from Dunkirk in the second world war and is awarded annually to the engineering apprentice who has the highest number of marks at the Huddersfield Technical College combined with the best practical performance in the factory.

The high standard which has been set by the apprentices has made the selection a difficult one, and Mr. Johnson is to be congratulated on his success.

Unbeaten Ladies

After playing fifteen of their twenty matches in the 4th Division of the Manchester Women's Hockey League, the Blackley ladies' hockey team is still unbeaten. They have also reached the semi-final of the Haworth Trophy, and have every confidence of reaching the final.

The team have developed into a well-balanced, thrustful side under the leadership of Beryl Shaw, who sets a grand example by her display at right full back. The forwards are a fast and clever goal-scoring line, with centre forward Audrey



Blackley ladies' hockey team, still unbeaten after fifteen matches

Lambert leading the way with 43 of the team's total of 78 goals. The vice-captain, Margaret Wilde, has kept goal to such good effect that only 23 goals have been scored against the side.

GENERAL CHEMICALS DIVISION

Pigeon Fancier

When, over thirty years ago, Harry Garner, now at Rock-savage Works, picked up an exhausted racing pigeon he could



Mr. Harry Garner with one of his pigeons

hardly have known that one day he would be breeding birds and preparing them for the time when they could race over 500 miles of sea and land to win trophies.

On that particular day Harry's father, having tended the bird, attached a slip of paper containing his name and address to its leg and sent it on its way. In due course the grateful owner presented Harry with a young bird, and thus a new enthusiast of pigeon fancying was made.

For seven years he just kept a few birds as pets, and then, in partnership with his father, he joined the Frodsham Homing Society and started to breed and train birds for racing.

Five years elapsed before their initial success, a first-home from Dorchester, a race of 186 miles for old birds. However, it was not until long-distance racing resumed after the war that Harry (now racing in his own right, assisted by his brother) started to win the classics, and in 1947 his birds gained one first, four seconds and one third place in races from Le Bourget.

From 1948 to the beginning of the 1953 season his successes have included no fewer than five first, twelve second, seven third and three fourth places in Continental and home races, including a second place in the Cheshire and North Wales Combine during a race from Marennes, a distance of 525 miles. During 1953 he created a new record for the Frodsham Homing Society when he won seven first, two second and four third prizes, the best performance in the society since its inception 54 years ago. This record was achieved by winning four out of five cross-Channel races.

Harry Garner has one great ambition, and that is to get a bird home first from Marennes in record time in order to win first prize in the Cheshire and North Wales Combine.

LIME DIVISION

Veteran First-aidier Dies

Mr. W. S. Taylor, first aid attendant at Tunstead Kilns, who died on 21st February, will be missed sadly not only at Tunstead but in I.C.I. first aid circles generally.

He had what is probably a unique record in the I.C.I. First Aid Competitions. On seven occasions he captained the Lime Division team at the final in London, and on no fewer than four of these succeeded in taking the trophy home to Buxton. His team also finished second once and third twice.

Mr. Taylor, who was 56, had over 43 years' service with the Company. Until July 1949 he was a blacksmith at South Central Workshops, but a long spell of illness made it necessary for him to undertake lighter work. After spending a short time in Research Department he was transferred to Tunstead Kilns as first aid attendant.

He had devoted nearly the whole of his leisure to first aid for many years, and was a member of the Buxton Division of the St. John Ambulance Brigade.

METALS DIVISION

Second Appearance

Twenty years ago Mr. Sam Davies was the subject of an article—"A Day in the Life of a Heavy Worker"—written for the *Magazine* by Mr. Randolph Churchill.

Now, his days of arduous labour comfortably behind him, Mr. Davies comes into the picture again, for last month this veteran pensioner celebrated both his eightieth birthday and his golden wedding anniversary.



Eighty years old, fifty years married: Mr. Sam Davies and Mrs. Davies

Mr. Davies began his working life 68 years ago at one of the factories in Swansea owned by the Vivian family. By the time he retired he had given 53 years' service to the Vivians, 37 of them spent in the present Landore Works of I.C.I. Metals Division. A firm believer in joint consultation, Mr. Davies was a member of the first Landore Works Council, later being elected chairman of workers' representatives. He was also for some time chairman of his branch of the Transport and General Workers' Union.

NOBEL DIVISION

Saltcoats honours Dr. Fleck

Dr. Alexander Fleck, Chairman of I.C.I., became an honorary burgess of Saltcoats on 12th March. Lord Boyd Orr, formerly Saltcoats' sole honorary burgess, attended the ceremony, at which Mr. James Campbell senior and Mr. James Reid were also installed.

Dr. Fleck spent part of his boyhood in Saltcoats, and his father was a member of the town council from 1896 to 1899. The "burgess ticket" read out by the town clerk at the installation said that the honour was conferred on Dr. Fleck "in recognition of his outstanding services to science and to the industry of the nation, of the leading position to which he has



Dr. Fleck signs the Saltcoats Burgess Roll with Provost Gourlay and Mr. McAllum (town clerk) looking on

attained in the great corporation of which he is the head and of the honour which has thereby accrued to the burgh as the home of his boyhood, and in testimony of the high respect in which he is held by all its citizens."

The Provost of Saltcoats, Mr. T. M. Gourlay (who works at Ardeer), administered the oath of allegiance and presented Dr. Fleck with a burgess casket made of oak from St. Mary's Isle, Kircudbright, and containing an illuminated scroll.

Thanking the town for the honour it had done him, Dr. Fleck said that of all the honours and rewards it had been his good fortune to receive, none would be more cherished. It was just sixty years ago, he said, that he used to "creep unwillingly" to Saltcoats Public School. "I fear that at the age of five I did not appreciate fully the value of education," said Dr. Fleck. "Still less did I imagine that sixty years later I should be returning to Saltcoats to be made an honorary burgess."

'Ardil' in the Arctic

Dr. C. G. M. Slesser is back in the Development Department of the 'Ardil' factory at Dumfries after a year's adventure in the Arctic, for six weeks of which he was in total darkness.

Dr. Slesser resigned his job to join the British North Greenland expedition. A well-known mountaineer, with experience of climbing Scottish peaks in all sorts of weather, he filled the position of surveyor to the expedition. He is a chemical engineer by profession, but he learned surveying in order to take on the job.

Nobel Division had other interests in the expedition. They had contributed to the stores five tons of 'Seismex' made by the



Nobel detonators are unloaded in the snow by a member of the British North Greenland expedition

Roburite factory, which was needed to make a thorough geographical examination of the great ice-cap. Dr. Slesser also took with him some 'Ardil' wool garments to test in the severe conditions of the North Greenland winter. Among them were 'Ardil' wool sweaters, worn over string vests and under thick parkas. Dr. Slesser reported on his return that the 'Ardil' garments had successfully come through their searching test.

During the Arctic winter there was no sun at all for six weeks. The summer in North Greenland, however, is com-

paratively hot, although short. Dr. Slesser was one of eight men who spent the weeks of darkness walking 100 miles over glaciers, snow and rough ground from an outpost where four "weasel" vehicles had had to be left for the winter.

The End of Hamilton Tolbooth

The Division Technical Service Department recently had the melancholy job of advising on the demolition of a 300-year-old monument in Hamilton, Lanarkshire. It was the town's tolbooth tower, which had been the scene of much local



(Photos: Glasgow Evening Citizen)

Going . . . gone. Hamilton tolbooth succumbs to 28 charges of gelignite placed in its base.

history. Subsidence had caused the tower to lean over 1½ ft. from the perpendicular, and in the interests of public safety it was decided to demolish it.

Advised by Nobel Technical Service men and watched by some 500 people, contractors placed twenty-eight charges of gelignite in the base of the tower. The explosion brought mixed wonder and regret from the onlookers, one of whom remarked: "It was a lovely job. You'd never have thought they could do it just like that. Imagine bringing a' that doon and no' a windae in the hoose broken nor nothing!"

PAINTS DIVISION

Talking of Greece

The Rotary Club of Athens assembled to listen to the B.B.C. Home Service on 16th February, when Mr. Gordon Ellis of Paints Division Publicity Department broadcast a talk on the Ionian Islands of Greece with musical illustrations. Some of the folk songs had been tape-recorded in Greece by Mr. Ellis himself.

Mr. Ellis went to Greece in 1944 with the Royal Corps of Signals, and because he already knew French and had acquired a fair knowledge of modern Greek he was demobilised and given the managership of the British Embassy's Exhibition and Information Centres.



Mr. Gordon Ellis

Holding this post for nearly three years, he travelled the mainland and islands at frequent intervals, lectured on British life, organised film shows and broadcast from Radio Athens. His travels were made on anything from steamship to donkey, and he picked up a wealth of information, material and folklore on the journey.

To use his own words: "I went to Greece with a rifle and came back with a dozen crates." He has since been back to Greece to collect yet more material in sound and film.

Paints Division has another broadcaster—an Irish bass—working at Slough. He is Mr. Harold Watson Drennan, seconded for six months to Paints Sales Control from I.C.I. Northern Ireland Sales Office. He has broadcast some dozen times on the Northern Ireland Home Service and is a regular contributor to song festivals. Ballad and opera are his special interests.

I.C. (PHARMACEUTICALS) LTD.

Football Commentaries for Hospital Patients

Patients in the wards of twenty-two hospitals in the Manchester area are able to enjoy, from their beds, the football matches played at the Manchester City and Manchester United grounds.



Mr. R. Roberts

The commentaries which come over their headphones are provided by an organisation called the Manchester, Salford and District Hospital Commentaries Association, of which Mr. R. Roberts (I.C.(P) Transport Section) is secretary. The hospitals are linked by 70 miles of G.P.O. land lines to the football grounds, where teams of three commentators (Mr. Roberts among them) describe the games in progress.

The scheme is a costly one, but generous contributions have been received by the association from the football clubs and the hospital management committees. Radio firms and the G.P.O. have also been helping the Association. Mr. Roberts and his fellow commentators give their services voluntarily and hope soon to extend the commentaries to describe sporting events other than football matches, visits to theatres and other activities of local interest.

Mr. Roberts has been with I.C.(P) since 1946. He started his career with the L.M.S. and served during the war in the R.A.F. as a technical instructor and with the 2nd Tactical Air Force.

'TERYLENE' COUNCIL

Washtub Suits for sale Soon

'Terylene' suits for men were seen by the public for the first time in London last month. "The man's suit that mum can wash," as the *Daily Mirror* called it, was on display in several forms on the 'Terylene' stand at the Men's Trade Fair and caused a great deal of interest. Two 'Terylene' suits were chosen for the style parades at the fair.

As well as a suit of 100% 'Terylene,' suits of 'Terylene'/wool worsteds were shown on the stand, and lengths of heavier blend suitings. There was a 'Terylene' outfit for golfers consisting of 'Terylene'/wool trousers and a jerkin of 100%



The sports suit of the very near future: 55% 'Terylene' and 45% wool, washable and crease-resistant

'Terylene' filament yarn, which keep their shape no matter how often they are soaked.

'Terylene' suits will be on sale in the shops within the next few months, and are expected to cost from £20 upwards. 'Terylene' ties will be on sale in a matter of weeks, and socks and underwear are already available. For home knitters there is now available 100% 'Terylene' staple fibre hand knitting yarn, which makes warm, comfortable garments that neither felt nor shrink.

★ ★ ★

OUR NEXT ISSUE

We lead the May issue with a write-up of a famous process now in its thirty-first year—the synthetic ammonia process at Billingham. It is still something of a miracle of science how air and water are made to yield up their nitrogen and hydrogen and how these chemicals are combined together under high pressure to make ammonia. Ammonia, incidentally, is the raw material for nitrogen fertilizers.

Our colour feature is about stamp collecting. The illustrations have been chosen to bring out the point that in the stamp world (unlike the magazine world!) printing errors make money. Next Mr. George Ordish of C.A.C. writes a fascinating account of how he makes wine from the grapes grown by him in Kent. Lastly, Mr. A. H. Allsopp of Metals Division writes about Spain. His article is so good that we are publishing it despite Elizabeth Carter's article on Spain in the March issue.

We owe an apology to Mr. P. C. Allen and Dr. Caress for a mistake in these notes last month. Mr. Allen is, of course, the director responsible for 'Terylene,' and Dr. Caress is chairman of the 'Terylene' Council.

BACKWARD GLANCE

By Daisy Grocock

Drawings by Martin Aitchison

WHEN we went to school, my twin sister and I, towards the last years of Queen Victoria's reign, we could already read, and so could many of the five- and six-year-olds whose class we joined. I imagine they had learned the alphabet as we did—from the porridge and cornflour packets and from the few tins which then came into the kitchen.

In our case an elder sister followed this with some lessons from a first reader (NOT *Reading Without Tears*, I think); and thus casually, and because we so much wanted to know what was in books, we learned to read. There were no ready-made amusements then, no labour-saving devices in the kitchen; families were generally large, so mothers had no time to read stories to children; if you wanted "a book at bedtime" you learned to read it yourself.

When we were five and a half, the elder sister (a little flurried because she was getting late for her own classes) presented us at the kindergarten attached to her school. We were kindly received by an elderly, plain-looking teacher who was slightly deaf. I am sure this woman, who for many years taught the smallest children in that school, had never heard of child psychology, but she was most successful.

No child was ever frightened in her class. I never remember one crying, and yet she knew how to keep us quiet. If we were inclined to fidget, we were told to fold our arms in front, or to put our hands behind our backs, or even on our heads; I do not think these odd postures ever did us any harm. As far as I remember, we never took advantage of the primary teacher's deafness, so that it did not seem to constitute a drawback, although it had some strange results. I remember how she could not correct the pronunciation of names when she supervised our knitting while a child with a clear voice read aloud. So Hugh became "Hug" and Mrs. Gillespie "Mrs. Gilles-spy."

Our school once had a visit from a Very Distinguished Person. We never knew why—perhaps the headmistress



was a protégée of the noble family, or perhaps it was because we were considered an advanced school—which indeed we were, for those times. We sat at small tables instead of desks and we did raffia mats, crayon drawings and knitted squares in scarlet and white for bath mats.

The visitor's first remark was, "Oh, these must be little twins!" "Yes, and sisters too; isn't that nice!" said the bright child of the class. The visitor dissolved into silent laughter, but the teacher clapped her hands for silence and took advantage of the episode to teach us something: "Attention, children! Repeat after me—Sisters are not always twins, but twins are *always* sisters." We felt we had learned the eleventh commandment. But I feel twins did not mean very much in our school, for I was once in a form with three other pairs of girl twins, yet I never heard any one comment on the fact.

In those days children had no periods of "free activity" in classrooms. These were places where we were continually being taught something, and we were expected to learn whatever it was. We did have a good break in the garden at 10.30, when we played rather gentle games, and twice a week we had marching and drill in the hall, to the music of a piano. Occasionally we did odd things with swinging clubs and waving wands, but there was no gymnasium apparatus and little real activity.

Once, a younger sister, craving some more active exercise, climbed to the top of the school building and swung by her hands from a projecting bar. For this she qualified for the only kind of corporal punishment our school indulged in—three light strokes of a ruler on each hand. As the climbing feat in question had not been forbidden (because it was not visualised), it appeared to our confused childish minds that the culprit was being punished because she had given an immodest display of white frilly underclothes. Fortunately she cried so hard at the thought of her disgraceful caning-to-come that she was sick by lunchtime and the punishment was never inflicted.

I remember also that this sister was quite petrified with fright when, for the first time in her experience, we met on our way to school a tall brown bear fastened by a thick chain to a small swarthy Italian. I had met him before and was very angry because the Italian flourished a thick cudgel when he shouted to the bear to do his shuffling dance. On more mature reflection I do not think the bear was cruelly treated (other than by being kept in captivity), for he was at once his master's capital and his living. Moreover, they lodged together at night in barns and outhouses, and I am sure the bear could have killed the man some dark night in their double bedroom. But he never did.

Another being who did a shuffling dance when we met

him was Jack-in-the-Green on the first of May. He was a sweep in a wicker cage, stuck all over with green leaves, and he rattled a collecting box, presumably for some sweep's charity. The May Day processions in the early nineteenth-hundreds had no political significance as they have now; the trades and crafts then adhered to the old style of rural revels—carts and horses were decorated with fresh, fragrant flowers; trade union members walked in procession with banners and bands. There were several odd, traditional figures like Jack-in-the-Green, and it was all very peaceable and charming.

All our schooldays opened with a hymn and a prayer. We were taught Bible history most days, reading every day, and when we began to make letters and write, that came every day too. We sang chants about numbers—"One and one make two, two and two make four" and so on until we had memorised simple addition; we then sang "Twice one are two," etc., until we knew the multiplication tables. Our most advanced tables were concerned with money: "Twelve pence are one shilling, twenty pence are one and eightpence," and so on up to "One thousand pence are four pounds, three and four pence," a figure which comes instantly to my mind when I visualise one thousand copper pennies.

Before we were through our first classes we certainly had learned to count and to do simple arithmetic, to read easily and to write. I never knew a child who could not read and write. If a child was backward in reading, I am sure the teacher "kept her in" and stayed with her until she had taught her to read.

We wrote many "copies," some designed to give us a good handwriting, some as a punishment. Personally, I very much wished to acquire a distinguished handwriting, but I never did. I tried, but did not succeed; so I think



"Oh, these must be little twins." "Yes, and sisters too; isn't that nice!"

a style of writing must be something very individual, controlled by character or heredity or some other immutable factor.

Our copies, especially the ones we wrote as a punishment, were designed to teach us rectitude: "Honesty is the Best Policy"; "Whatever is worth doing is worth doing well"; "Whatever thy hand findest to do, do it with all thy might." One I wrote thousands of times was "June is the loveliest month of the year"; and even today, in spite of a lifetime of wet and cold June holidays and ruined Derbys and Ascots, I still think June *ought* to be a sunny month.

The nearest we ever came to a game in our schoolroom was when on Friday afternoons we stood in alphabetical order round the walls of the class for a spelling bee, progressing to the head of the line if we succeeded where others before us had failed. I still remember now how thrilled I was at getting from the middle to the top of the line on "parallelogram."

But perhaps the most striking difference between those days and now was the absence of any equivalent of today's "juvenile delinquent"—a term then unknown. I am sure our school never had a child who was in trouble with the police or taken to court.



"Me and my Shadow"

Photo by F. Baranyovits (Hawthorndale)